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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/574,783

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Hideki Kitamura

NISH.0001

2566

7590

03/31/2009

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EXAMINER

NELSON, MICHAEL B

ART UNIT

PAPER NUMBER

1794

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DELIVERY MODE

03/31/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/574,783	<b>Applicant(s)</b> KITAMURA ET AL.	
	<b>Examiner</b> MICHAEL B. NELSON	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 8-22 is/are pending in the application.
- 4a) Of the above claim(s) 14-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8-13, 20-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendments filed on 01/02/09 have been entered. Claims 1-4, 8-13 and 20-22 are currently under examination on the merits. Claims 14-19 are withdrawn from consideration for being drawn to non-elected subject matter. The previous objections to the claims are withdrawn as a result of applicant's amendments. Please note that human translations of the prior art documents have been provided to replace the machine translations used in the previous office action. The examiner thanks the applicant for pointing out the mistake in the naming of the prior art document in the previous office action, the document is currently referred to as Yoshida et al.

### ***Claim Rejections - 35 USC § 102/103***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
6. Regarding 102/103 rejections, when the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention but has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980) a 102/103 rejection can be made. See MPEP §§ 2112- 2112.02.
7. Claims 1-4, 8-13 and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated, or in the alternative are rejected under 35 U.S.C. 103(a) as being unpatentable over, Yoshida et al. (JP 07-085722), see Translation (NPL document U).

Regarding claims 1 and 20-22, Yoshida et al. discloses a semiconductive film having a composition of 5-40 parts conductive filler to 100 parts polymer ([0008]), inter alia poly ether ether ketone, ([0007]). The conductive filler of Yoshida et al. is disclosed as being sold under the trade name "KETCHIEN black EC," which is believed to be the same as the instantly

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disclosed "Ketjen Black EC" (Example 1, Page 36). Yoshida et al. also discloses that the semiconductive film have a volume resistivity of between  $10^{11}$  and  $10^{12}$  ([0013]), with a variation of 1-10 times the minimum value, which overlaps the instantly claimed 1-5. The thickness is also disclosed as being 150 microns thick ([0012]). The carbon black used has a DBP oil absorption rate that reads on the claims (See Claim 1). Regarding the consistency of the film's thickness, it would have been obvious to one having ordinary skill in the art to have maintained the most consistent thickness along the length of the film in order to minimize variation in the semiconductive properties of the belt. Regarding the "Folding Endurance," considering the substantially identical composition of the disclosed semiconductive resin with the instantly disclosed examples (i.e. Example 1, page 36-37), the semiconductive film of Yoshida et al. would exhibit the instant claimed properties.

Regarding claims 2-4, Yoshida et al. discloses all of the limitations as set forth above. Yoshida et al. does not disclose the particular instant claimed properties of claims 2-5, however, given the substantially identical composition of the disclosed semiconductive resin (i.e. PEEK to conductive filler ratio and type of conductive filler) as compared to the instantly disclosed examples (i.e. Example 1, page 36-37), the semiconductive film of Yoshida et al. would exhibit the instantly claimed properties.

Regarding claims 8-13, Yoshida et al. discloses all of the limitations as set forth above. Additionally, Yoshida et al. discloses that the conductive filler is carbon black and has a DBP in the range of 30-700 ml (i.e. B and A with DBP of 200-700 and 30-180 ml, [0004]). The carbon black used "KETCHIEN black EC," is believed to be the same as the instantly disclosed "Ketjen Black EC" (Example 1, Page 36) and is an acetylene or oil furnace black. Given the

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substantially similar type of carbon black (i.e. tradename and DBP ratio) the conductive filler of Yoshida et al. will exhibit the claimed volume resistivity and volatile matter content as instantly claimed. Yoshida et al. also discloses that the semiconductive film be used as a charge control member either as part of a tuber roller or a semiconductive belt ([0010]).

***Claim Rejections - 35 USC § 103***

8. Claims 1-4, 8-13 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable Yoshida et al. (JP 07-085722), see Translation (NPL document U), in view of Moss et al. (JP-03-261531), see translated abstract (no machine translation is available).

Regarding claims 1 and 20-22, Yoshida et al. discloses a semiconductive film having a composition of 5-40 parts conductive filler to 100 parts polymer ([0008]), inter alia poly ether ether ketone, ([0007]). The conductive filler of Yoshida et al. is disclosed as being sold under the trade name "KETCHIEN black EC," which is believed to be the same as the instantly disclosed "Ketjen Black EC" (Example 1, Page 36). Yoshida et al. also discloses that the semiconductive film have a volume resistivity of between  $10^{11}$  and  $10^{12}$  ([0013]), with a variation of 1-10 times the minimum value, which overlaps the instantly claimed 1-5. The thickness is also disclosed as being 150 microns thick ([0012]). The carbon black used has a DBP oil absorption rate that reads on the claims (See Claim 1). Regarding the "Folding Endurance," considering the substantially identical composition of the disclosed semiconductive resin with the instantly disclosed examples (i.e. Example 1, page 36-37), the semiconductive film of Yoshida et al. would exhibit the instant claimed properties. Regarding the consistency of the film's thickness, it would have been obvious to one having ordinary skill in the art to have maintained the most consistent thickness along the length of the film in order to minimize

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variation in the semiconductive properties of the belt. While the disclosure of Yoshida et al. may provide disclosure which implicitly provides the instantly claimed thickness properties, Yoshida et al. does not explicitly disclose any specific steps which would result in more uniform thickness. Moss et al. which is also directed towards PEEK films, discloses cooling a PEEK composition at a temperature between 100 and 170 degrees Celsius in order to provide a smooth (i.e. uniform thickness) film. Hence it would have been obvious to have used the cooling temperature teachings of Moss et al. with the PEEK resin composition of Yoshida et al. to produce a film having a uniform thickness.

Regarding claims 2-4, modified Yoshida et al. discloses all of the limitations as set forth above. Modified Yoshida et al. does not disclose the particular instant claimed properties of claims 2-5, however, given the substantially identical composition of the disclosed semiconductive resin (i.e. PEEK to conductive filler ratio and type of conductive filler) as compared to the instantly disclosed examples (i.e. Example 1, page 36-37), the semiconductive film of Yoshida et al. would exhibit the instantly claimed properties.

Regarding claims 8-13, modified Yoshida et al. discloses all of the limitations as set forth above. Additionally, Yoshida et al. discloses that the conductive filler is carbon black and has a DBP in the range of 30-700 ml (i.e. B and A with DBP of 200-700 and 30-180 ml, [0004]). The carbon black used "KETCHIEN black EC," is believed to be the same as the instantly disclosed "Ketjen Black EC" (Example 1, Page 36) and is an acetylene or oil furnace black. Given the substantially similar type of carbon black (i.e. tradename and DBP ratio) the conductive filler of Yoshida et al. will exhibit the claimed volume resistivity and volatile matter content as instantly

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claimed. Yoshida et al. also discloses that the semiconductive film be used as a charge control member either as part of a tuber roller or a semiconductive belt ([0010]).

***Response to Arguments***

9. Applicant's arguments filed on 01/02/09 are considered moot in light of the new grounds of rejection which were necessitated by applicant's amendments. Arguments which are still deemed to be relevant are addressed below.

10. Regarding applicant's arguments that the films produced according to the disclosure of Yoshida et al. would not possess the instantly claimed thickness uniformity, the examiner does not find the evidence present to support this assertion adequate. Applicant alleges that a lip clearance of at most 1.0 mm and a molding temperature of between 60 and 120 degrees Celsius are needed to maintain uniform thickness as instantly claimed. Firstly, the examiner notes that nowhere in the instantly claimed product are there any such limitations.

11. Secondly, the evidence provided to shows that the prior art would not possess the instantly claimed thickness uniformity is lacking. Specifically, the "Embodiment 2" example in Yoshida et al., in which the cooling temperature is set to 150 degree Celsius is not proven to lack uniform consistency or the desired folding properties merely by the applicant's comparative example having a cooling temperature of 210 degrees Celsius. The two temperatures are not the same and therefore the conclusion that the prior art lacks the claimed properties is improper. Moreover, the additional rejection provided in this office action, to be addressed below, would lead one having ordinary skill to believe that the temperature would in fact result in more uniform thickness (Moss et al., See Abstract).



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12. Lastly, even if proper evidence was provided to show that the prior art did not produce a film having the instantly claimed properties, the fact that the evidence would be based on non-claimed limitations (i.e. cooling temperature and lip clearance), would render the affidavits improper. Evidence of unexpected properties may be in the form of a direct or indirect comparison of the claimed invention with the closest prior art **which is commensurate in scope with the claims**. See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) and MPEP §716.02(d) - § 716.02(e). In summation, because the lip clearance and cooling temperature are not instantly claimed, the applicant is required to provide evidence to show that the prior art would not possess the instantly claimed properties, (i.e. the properties could be obtained via methods other than the instant methods). Evidence merely showing that the prior art is not produced by the instant method is insufficient to rebuke the prima facie rejection under 102/103.

13. Finally, the examiner has provided a new rejection of the instant claims to show that even if Yoshida et al. is shown to lack the instantly claimed properties, Moss et al. discloses teachings to lead one having ordinary skill to modify Yoshida et al. to arrive at the instantly claimed properties. The new rejection is in addition to, and does in no way invalidate, the previous 102/103 rejection, which has yet to be overcome. Applicant's amendments to the claims render this action final even though additional rejections have been presented.

14. Regarding applicant's arguments that the two types of carbon black mentioned in Yoshida et al. are not needed in the instant invention is not persuasive because the instant claims do not require only one type of carbon black.

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***Conclusion***

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL B. NELSON whose telephone number is (571) 270-3877. The examiner can normally be reached on Monday through Thursday 6AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/  
Supervisory Patent Examiner, Art Unit 1794

/MN/  
03/24/09